negative, and increases gradually during the course of the disease. In the more chronic forms, such as arthritis, the degree of activity varies with the changes in the clinical course of the disease. Cutaneous reactions obtained with meningococcal and gonococcal antigens suggest a group reaction. In diagnosis, if infectious meningococcus or Micrococcus catarrhalis are excluded, a positive reaction is considered confirmatory evidence of a gonococcal infection.

Inclusions in the Neutrophilic Cells in Scarlatina.—DÖHLE recently described inclusions in the polynuclear neutrophiles in scarlet fever, which he considered diagnostic of the disease. His results were largely confirmed by Kretschmer. I. AHMED (*Berlin. klin. Woch.*, 1912, xlix, 1232) finds, however, that the inclusions, while frequent in scarlet fever, are by no means uncommon in other febrile diseases. Thus in 10 cases of pulmonary tuberculosis which were febrile, inclusions were found in the leukocytes in all; 5 of 10 afebrile cases of tuberculosis were also positive. A patient with tuberculous meningitis, whose blood was examined four hours antemortem, showed inclusions. In 6 cases of typhoid with high fever the result was positive. German measles furnished 1 positive case. In 2 cases of measles complicated with pneumonia no inclusions were observed, but in 2 severe uncomplicated cases of measles they were found to be present. In 2 patients with varicella without fever the result was negative, as it was in the blood of 9 healthy adults. It is evident from these findings that the inclusions are not specific for scarlatina. They may be found in febrile diseases generally.

A Source of Error in the Quantitative Determination of Enzymes in the Feces.—D. GERGANOFF (*Deutsch. med. Woch.*, 1912, xxxviii, 1130) points out the possibility of error in the quantitative determination of enzymes in the feces through the admixture of blood. Blood, whether it be from the stomach or intestines, may lead to considerable increase of the fecal ferments. (Gerganoff studied diastase particularly.) Especially intestinal hemorrhages, when large, produce a decided increase. But gastric hemorrhages, when hydrochloric acid is lacking, may lead to a similar result. When free hydrochloric acid is present in the stomach it may be concluded with reserve that a bloody stool rich in diastase is not due to gastric hemorrhage, but to bleeding from the duodenum or lower portions of the intestine. This point may prove useful in the diagnosis of a gastric ulcer or in its exclusion.

Actinomycosis Treated with Vaccines.—KENICULT and MIXTER (*Boston Med. and Surg. Jour.*, 1912, clxvii, 90) have treated with "vaccines" 8 cases of actinomycosis, 2 with abdominal, 2 with pulmonary, and 4 with cervicofacial lesions. The vaccine was prepared from pure culture grown in glucose agar. The week-old colonies were ground in salt solution and sterilized by heat and preserved in lysol. It was impossible to standardize the vaccine. Therefore treatment was begun with very small doses, which were generally increased in strength. In addition, all collections of pus were incised and drained. The thoracic cases were advanced when first seen. They grew rapidly worse and died. The vaccine caused an immediate large increase of granules in the sputum, lasting several days. One of the abdominal cases, after drainage of an abscess in the groin has apparently completely recovered after two months of vaccine treatment. The second died after varying periods of improvement. The impression was that the acute process was held in check. Of the 4 jaw cases, 3 have recovered, and 1 is rapidly improving. It seemed to Kenicult and Mixter that the use of vaccines in superficial actinomycosis does do good.

The Results of the Treatment of Pulmonary Tuberculosis with Rosenbach's Tuberculin.—R. Kohler and M. Plaut (*Zeitsch. f. klin. Med.*, 1912, lxxiv, 179) have employed Rosenbach's tuberculin in the treatment of pulmonary tuberculosis. This preparation represents one of the many attempts which have been made to obtain a less toxic substance than Koch's old tuberculin. It is a cluture of tubercle bacilli inoculated with Trichophyton holosericum album. The latter alters (digests) proteins, and it is supposed that the toxic, labile molecules of the tubercle bacilli are attacked. The toxicity of this tuberculin is apparently about 100 times less than the old Koch's tuberculin, while the active immunizing property is undiminished in strength. Kohler and Plaut have selected 80 dispensary patients, most of whom were in the first stage, though some were in the second stage of pulmonary tuberculosis. One-half of them were treated with tuberculin, the remaining half being treated with hygienic and dietetic measures alone. The patients were carefully followed for several months. The results obtained in the group treated with Rosenbach's tuberculin were strikingly good. The disease was favorably affected in 85.4 per cent. of the cases, whereas only 36.8 per cent. of the controls improved. The result is even better than this would indicate, for the patients treated with tuberculin had not the benefit of the hygienic measures used with the controls. A gain in weight was noted in 70.2 per cent. of the patients treated with tuberculin, in 33.4 per cent. of the controls. Of the tuberculin patients, 16 had elevations of temperature when they came under treatment; in 13 the temperature became normal, in 3 it was uninfluenced. The effect of the tuberculin on the subjective symptoms of the patients was the most remarkable feature of the treatment. Many of the patients were sceptical in the beginning, and frequently complained of sore arms from the injections; it is probable that suggestion can be eliminated. Nevertheless, the cough lessened or disappeared completely; night sweats, of which the majority complained, had ceased in all but 4 cases. The appetite was greatly increased, and pains were diminished or vanished. Reactions to the tuberculin were both local and general (swelling and pain in the arm, elevation of temperature, etc.). In many instances the local signs in the lungs increased shortly after the institution of the tuberculin treatment, to improve later. The case histories are given in considerable detail, and the dosage of the tuberculin is considered.

The Gastro-intestinal Disturbances of Pernicious Anemia.—In 58 cases of pernicious anemia, Friedenwald (*Boston Med. and Surg. Jour.*, 1912, clxvii, 160) has made close observations of the gastro-intestinal manifestations. Loss of appetite was observed in 38 cases,